Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Director of Central Intelligence

Top Secret

[redacted]

25X1

The Readiness of Soviet Air Forces

Interagency Intelligence Memorandum

WARNING NOTICE
INTELLIGENCE SOURCES
OR METHODS INVOLVED
NFIB DEPARTMENTS ONLY
PROPIN
DO NOT GIVE OUT
OR MARK ON

MORI/CDF Pages _1-15
MORI#261313
NARA NN3-263-00-002

Top Secret

NI IIM 82-10001JX

[redacted]

April 1982

Copy 220

25X1

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

25X1

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Page Denied

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

25X1

THE READINESS OF SOVIET AIR FORCES

Information available as of 12 February 1982 was used in the preparation of this Memorandum.

25X1

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

25X1

CONTENTS

	Page
PREFACE	vii
EXECUTIVE SUMMARY	ix
Introduction	ix
Background	x
The Forces	x
Determinants of Air Force Readiness	xi
Assessment of Soviet Air Readiness	xiii
Outlook	xv

25X1

25X1

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

25X1
Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Page Denied

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

25X1

PREFACE

This Interagency Intelligence Memorandum was commissioned by the Director of Central Intelligence in response to a request by the Secretary of Defense for an in-depth analysis of the readiness of Soviet air forces. This memorandum assesses readiness by examining a number of issues including the quality of personnel and equipment and the effectiveness of training. It focuses on those air force elements that would support theater operations.

The memorandum contains a number of comparisons of Soviet and US air forces to provide a framework for reference in viewing Soviet readiness. The reader should not conclude from these comparisons superiority on either side in meeting wartime requirements. The study also speculates on the relative effectiveness of Soviet and opposition air forces in several scenarios. These judgments are intended to provide a perspective on the impact of readiness in its broadest sense on the Soviet air forces as they face differing foes under differing conditions. The judgments, however, are not based on detailed operational analysis or gaming.

The memorandum was produced under the auspices of the National Intelligence Officer for General Purpose Forces. It was drafted the Directorate of Intelligence, CIA, with contributions by the Defense Intelligence Agency and the Assistant Chief of Staff for Intelligence, United States Air Force. It was coordinated with the intelligence components of the Department of Defense and the Directorate of Intelligence, CIA.

25X1

25X1

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

25X1

EXECUTIVE SUMMARY

Introduction

Since 1970 Moscow has underwritten an ambitious modernization program that is transforming the Soviet air forces from a largely defensive arm into one with significant offensive potential, particularly for operations on the Soviet periphery. The forces have been equipped with new aircraft that possess substantially greater combat range, more lethal firepower, and more versatile support systems. Nevertheless, personnel and equipment deficiencies impose constraints on the readiness of Soviet air forces.

US and Soviet definitions of readiness are similar, focusing on the ability of a force to perform the missions for which it is organized. In its most basic sense, readiness consists of two essential elements: the ***availability*** of combat forces as determined by such factors as alert rates, operational readiness rates, and peacetime basing; and the ***preparedness*** of combat forces including such factors as maintenance, training, logistics, and weapon system capabilities. This study addresses readiness in its broadest sense, taking into account both availability and preparedness.

In this memorandum we assess readiness in two steps. First we review five factors that contribute to readiness: the availability of qualified manpower, equipment performance and readiness, the air forces maintenance system, training, and logistics. Second, we assess Soviet air force readiness as a function of the ability of the forces to:

— Generate combat-ready aircraft by converting their forces from a peacetime status to a wartime footing.

— Deploy or move combat-ready forces into or within combat areas.

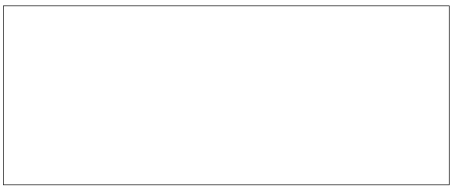
— Sustain combat operations over time.

— Employ and manage air forces in combat operations.

25X1

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

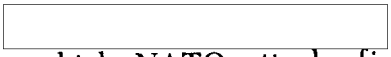


25X1

Background

Soviet air forces are not maintained at full wartime strength in peacetime. Rather, Soviet doctrine on theater war assumes that hostilities would be preceded by a period of crisis during which military forces would be mobilized. Soviet planners generally anticipate having sufficient warning to allow the forces several days to a few weeks to attain full readiness and to predeploy some units. By the opening of hostilities, the Soviets expect their air forces to be ready to launch a massive, coordinated air campaign.

The Soviets assign their air forces three general tasks for theater war: to gain and maintain air superiority, to destroy the nuclear delivery capability of the enemy, and to support the ground forces. They believe that, to accomplish the latter two tasks, the chief initial task of the air forces in a conventional war is to achieve air superiority. The first several days of combat appear to be critical. During this period the Soviets would commit the bulk of their air forces to a theaterwide air operation against enemy airfields and air defense installations. During and subsequent to this air operation, attacks on enemy nuclear delivery systems would have a priority equal to the air superiority effort. In nuclear combat, air forces would play a lesser air superiority role since missiles would be the primary means of destroying enemy airfields and air defense installations.



depict a period of escalating tension, after which NATO attacks first with conventional weapons. After containing the initial attack, Warsaw Pact forces go over to the offensive. Escalation to the nuclear level generally occurs when NATO, faced with defeat, attempts to salvage the situation by using nuclear weapons. Once the nuclear threshold is crossed, the conflict evolves through successive exchanges of nuclear strikes and brief pauses. The Soviets have optimized their forces for a short, intense campaign, but they recognize the possibility of a protracted conflict in Europe. They credit manpower and material reserves, therefore, as critical to the ultimate outcome.

25X1

The Forces

Soviet air forces for theater operations total some 6,200 aircraft. About three-fourths of these are stationed in areas west of the Urals; the rest are in the eastern USSR. Another 2,500 interceptor aircraft have a

25X1

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

25X1

primary mission of territorial air defense; some of these, however, could be used to support tactical operations outside the USSR. Soviet air forces have no organized reserves but can call on their training establishment for reinforcements. We believe that these forces, with some 2,300 aircraft, could provide an additional 700 to 800 modern aircraft with trained crews. Mobilization of even this small part of the training establishment would disrupt its training program, however.

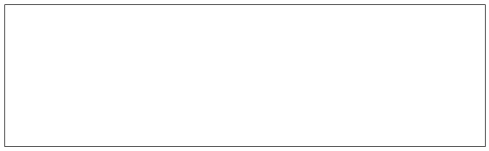
About 40 percent of the air forces tactical aircraft are assigned air-to-air roles and 45 percent have ground attack missions; the rest serve in reconnaissance or other support roles. Most of these aircraft are relatively modern models. Conversely, the bomber force is a good deal older; only about 10 percent of the force is equipped with the Backfire, the Soviets' newest model. The military transport fleet is well equipped for its primary mission of supporting operations in areas adjacent to Soviet territory. Only about a third of the force, however, consists of long-range transports, and the transport fleet has a limited ability to support operations in more distant locations without access to airfields en route.

Determinants of Air Force Readiness

Manpower. The availability of manpower does not appear to be a barrier to readiness in the air forces. Soviet air forces appear to have enough qualified men in units immediately opposite NATO and China to maintain a high degree of personnel readiness. Moreover, they have access to a well-developed mobilization system that is able to build the forces to wartime manning levels rapidly. There is evidence, however, of undermanning in some units in the Soviet interior. The most critical shortfall appears to be in maintenance positions. Although we would expect them to have some difficulty in achieving full readiness rapidly, the location of these units would rule out their immediate use in theater war.

Personnel problems, such as low morale and poor discipline within the enlisted ranks, alcohol abuse, friction between ethnic groups, and animosity between first- and second-year conscripts also affect air force readiness. The air force seems to be able to control these problems, however, in part through screening of conscripts to eliminate or reduce the percentage of non-Europeans and those with low technical skills.

Equipment. The quality of Soviet combat equipment is a key contributor to the air forces generally good readiness posture. Although



25X1

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

25X1

Soviet aircraft tend to be inferior in performance to their US counterparts, they are much more reliable and more easily maintained by conscripts with relatively low technical skills. The most serious drawback of Soviet aircraft is their overall vulnerability to battle damage compared to US counterparts.

Maintenance. The Soviet maintenance system is well matched to Soviet weapons and personnel. The system emphasizes regular preventive maintenance; replacement, rather than repair, of defective components; and conservative scheduling of maintenance. It appears to operate well enough in peacetime to guarantee the high operational readiness rates called for by Soviet standards. The system probably would be overloaded in combat, however, by high sortie rates and the lack of battle damage repair capability at regimental level, thus creating sustainability problems.

Training. The Soviet air force training system appears to be quite good at preparing qualified commissioned officers but is of limited value for the lower ranks. Since conscripts and junior NCOs usually perform little more than menial tasks, air readiness has not yet been adversely affected. Soviet air crew training, however, has limitations that impact directly on pilot proficiency. Although the pilot training program is sufficient in teaching basic skills and flight operations, it lacks some of the realism of NATO pilot training and does not give the Soviet pilot as much training for operating in a high threat environment as his NATO counterpart. However, the Soviets appear to be aware of these problems and are attempting to correct them with advanced training programs. Although their training still is not as sophisticated as that of NATO, the gap appears to be narrowing.

The pilot training problem also is offset by the tendency to require less of pilots in combat operations and to leave them in combat units for much longer tours than their US counterparts. Nonetheless, should Soviet forces not be able to achieve a substantial numerical advantage, pilot training could be an important limitation in combat against a well-trained adversary.

Logistics. Soviet forces maintain large, dispersed stocks of ammunition and POL along with the means to move them to combat units. Once mobilized, the logistic system appears to be well-manned and fully capable of supporting sustained operations.

25X1

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

25X1

Assessment of Soviet Air Readiness

We believe that Soviet air regiments could conduct effective and sustained operations, but manpower, airbase logistics, and systemic constraints may be greater than Soviet planners anticipate. These difficulties plus higher-than-planned attrition may make it very difficult for Soviet air commanders to generate the required numbers of sorties against well-equipped and well-trained forces like those of NATO.

Force Generation. We estimate that Soviet air forces can be fully combat ready seven to 12 days after a decision to mobilize. Soviet interceptor units are at the highest level of readiness and could mount a fully coordinated air defense operation within a few minutes of alert. Offensive forces are at lower levels of alert, and extensive preparations of their command and control net and their logistic support structure would be necessary. We believe these forces would require about 48 hours to prepare a command and control structure for front-level operations and 72 hours for theater-level operations. Seven to 12 days would be needed to fully mobilize the logistic system. Although some combat operations would be possible before mobilization were complete, we would not expect Soviet forces to begin major operations unprovoked without completing full preparations. We believe that aircraft and crews from the Soviet training establishment would need at least 30 days to mobilize and might still have limited combat effectiveness without additional time for training.

Force Deployment. We believe that Soviet forces have sufficient mobility to meet their wartime requirements. Soviet transport forces have demonstrated their ability in extended, peacetime operations from remote bases with little support. The bomber force, although inherently less mobile, has no need to redeploy to reach its targets from peacetime bases but has sufficient capability to redeploy in order to enhance its survivability.

Soviet tactical air units are expected to be mobile. They must redeploy both to enhance survivability and to reach target areas. We estimate that regimental-size movements of 2,000 km or less can be completed in about 72 hours if fully supported by air transport, and in up to seven to eight days if given limited transport support. Moves over 2,000 km are complicated by the lack of air-to-air refueling and probably would require seven to eight days, even if fully supported by air transport.

25X1

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

25X1

Force Sustainability. We believe that Soviet planning calls for air units, particularly tactical units, to generate high sortie rates, especially during the initial phase of combat. We do not believe, however, that the offensive tactical force could meet its heavy requirements (two sorties per day per aircraft over the first 10 days or so of combat) for an extended period, especially given the prospects of substantial attrition.

Air forces at front level should have enough consumables to sustain about three weeks of combat before needing additional supplies from central depots. Air units, when mobilized, also have sufficient personnel to support high sortie rates and are at hardened airfields with sufficient protection to support operations even in the face of enemy attacks. Nonetheless, we suspect that high-intensity operations against well-developed air defenses would lead to high attrition rates. Thus it is unlikely that tactical forces would be able to maintain the sortie rates expected of them for more than a few days. After about 10 days, the sortie rate could fall to as low as half that required in Soviet planning.

Force Employment. Soviet air forces are well suited for defensive counter air operations. Their weapons and control systems are good and their aircrews are adequately trained. We believe, however, that they are less well prepared for offensive air-to-air missions. Their biggest limitation is aircrew training, although weapon system performance and command and control deficiencies also detract from overall capability. We believe Soviet capabilities in long-range ground attack, reconnaissance/support, and short-range airlift operations are generally good. Their weapon systems and command and control range from adequate to good. Aircrew proficiency may limit overall effectiveness, however. Direct support and long-range airlift capabilities are more limited, largely because of equipment deficiencies and, in the case of airlift operations, the small number of experienced crews.

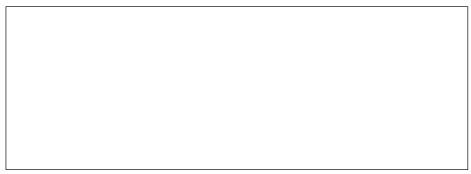
Implications for Effectiveness. The combat effectiveness of Soviet air forces is not absolute and will depend in large part on the capabilities of their opponent and to a lesser degree the location of the conflict. We believe the air forces could meet the goals set by Soviet planners in operations against China or other bordering, underdeveloped nations. Training, aircraft quality, numbers—except against China—and geography tend to favor the Soviets. Air superiority would be won quickly and Soviet air forces would be able to shift to ground support and other missions rapidly. The Soviets would be in a particularly advantageous situation if the conflict remained regional in scope and they could draw on forces throughout the Soviet Union.

25X1

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

25X1



Operations in more distant regions such as the Middle East—particularly against a well-equipped foe like the Israelis—would be much more difficult to support, and the chance of success would be lower. The speed with which Soviet air forces could be introduced into the region would depend on the availability of overflight routes. With direct routing, Soviet airlift forces would be able to move a force of some 135 combat aircraft into the area within a day or two. Indirect routing, as used in past airlifts to the Middle East, probably would increase the actual movement time to four days. Preparation time for any Middle East deployment could be a week or more.

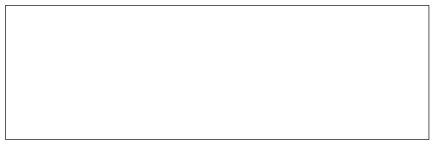
Soviet air units would face, in the Israelis, an aggressive foe with better aircraft and superior tactics and training. We believe that the Soviets could mount air defense operations, although their success would depend on the availability of a reliable command and control system. Conversely, the Soviets would require numerical superiority to achieve success against Israel in large-scale offensive air operations, largely because of the inferiority of Soviet pilot training.

Operations against NATO's Central Region would present similarly challenging problems. Although sustained, coordinated air operations probably could be mounted earlier by some Soviet forces, we believe the Soviets would prefer the seven to 12 days of preparation we estimate necessary for sustained operations. In addition to the steps necessary to prepare in-place forces, the Soviets probably would conduct a two-phase reinforcement with units from the western USSR. The first step, involving only one or two air divisions, could be completed within about 72 hours if supported fully by Military Transport Aviation (VTA). The second, considerably larger, probably would have more limited support and might require some seven or eight days.

We expect the Soviet air force to acquit itself well in air defense operations. However, in offensive operations these forces have limitations that we believe could deny them an early victory. If NATO's air and air defense forces could stave off an early defeat, high Soviet attrition could result in a sharply declining number of sorties and the distinct possibility of eventual failure for the air offensive.

Outlook

The outlook for Soviet air force readiness through the 1980s is mixed. On the one hand, the Soviets appear to be in the midst of a criti-



25X1

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

25X1

cal examination of their air forces that could result in a more effective approach to the employment of these forces. The Soviets also will continue to give their air forces new weapon systems, in part responding to US technology embodied in the F-14 and F-15. Combat training will continue to improve, so that Soviet pilots will be able to operate more independently and more fully utilize new weapon systems. We also expect some limited growth in the overall size of the force and believe there is some potential for much larger growth in offensive forces.

In contrast to these developments that will strengthen the air forces, pressure on their potentially weakest link, their manpower, could increase. New weapon systems and possible force increases are likely to exacerbate Soviet personnel shortages. These should not be significant in the commissioned officer force where selectivity and education tend to overcome problems of availability. The current enlisted force, however, is marginally adequate. Soviet demographic trends, requirements for greater conscript technical ability, and the possibility of force expansion could strain the system. We believe, however, that the Soviets have the means to deal with these challenges.

25X1

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

25X1
Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9

Page Denied

Next 58 Page(s) In Document Denied

Approved For Release 2008/01/28 : CIA-RDP85T00176R001500010001-9